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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,668	10/17/2005	Herwig Buchholz	MERCK-2686-1	1550
23599 7590 11/16/2009 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201				
EXAMINER				
BLAKELY III, NELSON CLARENCE				
ART UNIT		PAPER NUMBER		
1614				
NOTIFICATION DATE		DELIVERY MODE		
11/16/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

Office Action Summary

Application No.

10/553,668

Applicant(s)

BUCHHOLZ ET AL.

Examiner

NELSON C. BLAKELY III

Art Unit

1614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 6, 7, 9, 14, 16-18, 20-25 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18, 20-25 and 28-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 9, 14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Application Status

Claims 1, 2, 6, 7, 9, 14, 16-18, 20-25 and 28-32 of the instant application are pending. Claims 17, 18, 20-25 and 28-32 are withdrawn pursuant to Applicant's Amendment, filed 08/21/2009. Accordingly, instant claims 1, 2, 6, 7, 9, 14 and 16 are presented for examination on their merits.

Applicant's Arguments, filed 08/21/2009, have been fully considered. Rejections/objections not reiterated from previous Office Actions are hereby **withdrawn**. The following rejections/objections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Applicant's Amendment

Applicant's Amendment, filed 08/21/2009, wherein the specification and claims 2, 6, 7, 9, 14, 16, 18, 20-24 and 28-30 are amended, claims 17, 18, 20-25 and 28-32 are withdrawn, and claims 3-5, 8, 10-13, 15, 19, 26, 27, 33 and 34 are canceled, is acknowledged.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Fu (International Publication No. WO01/60628A2).

With regard to instant claims 1, 2 and 6, Fu discloses, in reference claims 1, 4 and 6, page 12, a laser sensitive pigment comprising at least one platelet-shaped substrate, e.g., synthetic mica particles (See reference claim 6 and page 3, lines 21 and 22 of the reference specification), coated with a mixed metal oxide coating, wherein the said coating comprises a host component, e.g., TiO_2 (titanium dioxide), and a marking component, e.g., Ag_2O (silver oxide), and wherein the mixed metal oxide coating comprises a host/marketing component weigh ration of 1/0.1-.4.

Fu fails to disclose specifically wherein the antimicrobial pigment is obtainable by agitating at 20-45 °C, a suspension comprising one or more inorganic pigments and silver oxide; however, the product is taught. Furthermore, as recited in MPEP 2113, product-by-process claims are not limited to the manipulations of the recited steps, e.g., obtainable by agitating at 20-45 °C, a suspension comprising one or more inorganic pigments and silver oxide, only the structure. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claims is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964 (Fed. Cir. 1985).

Accordingly, the instant invention, as claimed in claims 1, 2 and 6, is anticipated by Fu.

Response to Arguments

Applicant's Arguments (Remarks, filed 08/21/2009, pages 7 and 8), with respect to the rejection of claims 1, 2, 6, 7, 9, 14 and 16 under 35 U.S.C. 103(a), have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1, 2, 6, 7, 9, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fu (International Publication No. WO01/60628A2), in view of Bagala, Sr. (U.S. Patent No. 7,045,007B2; cited in a previous Office Action), as evidenced by Seo *et al.* (Cosmetics and Toiletries®, Vol. 112, pages 83-90; 1997; cited by Applicant).

With regard to instant claims 1, 2, 6, 7, 9, 14 and 16, the teachings of Fu are set forth *supra*.

Fu fails to disclose specifically wherein the antimicrobial pigment additionally contains organic and/or inorganic colorants or elements as dopant (instant claim 9), or wherein the one or more layers of transparent, semitransparent or opaque, selectively absorbing, nonselectively absorbing or nonabsorbing metal oxides, e.g., TiO_2 , are arranged as alternating layers with the refractive index $n > 1.8$ and $n \leq 1.8$ (instant claim 7). However, Bagala, Sr. *et al.* disclose, in reference claims 1-8, columns 11 and 12, an effect pigment comprising metal oxide-coated laminar platelets in which the platelets are a mixture of about 5 to 90% platy glass and 90 to 5% platy mica, e.g., synthetic mica (reference column 1, line 50), wherein the metal oxide comprises iron oxide (inorganic colorant or dopant; See instant claim 9) and titanium dioxide. In the instant excerpt, Bagala, Sr. *et al.* further disclose wherein the metal oxide coating comprises a plurality of layers, each of which comprises a metal oxide. In column 4, lines 38-52, Bagala, Sr. *et al.* disclose effect pigments constructed with a reflecting layer, e.g., silver, which is overcoated with a low index of refraction material typically having a refractive index from 1.3 to 2.5, which, in turn, may be overcoated with a layer comprising iron and titanium dioxides. See instant claim 7.

Fu fails to disclose specifically wherein the inorganic pigment has antimicrobial properties (instant claims 1, 2, 6, 7, 9, 14 and 16). However, for evidentiary purposes, Seo *et al.* disclose, on page 83, second column, lines 3-9, that metals, e.g., silver, and their compounds, e.g., silver nitrate and silver oxide, show antimicrobial activity.

Fu fails to disclose specifically wherein the maximum deviation for the L value is $-6 \leq \Delta L \leq 6$, and a and b are both $-5 \leq \Delta a/\Delta b \leq 5$ (instant claim 14), or wherein the

amount of the silver oxide is in the range of 0.001 to 10% by weight, based on the inorganic pigment (instant claim 16). However, it is not inventive to discover the optimum ranges by routine experimentation when general conditions of a claim are disclosed in the prior art. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP §2144.05(II). Additionally, on page 3, lines 26-29, Fu discloses wherein light scattering methods were employed to measure the mica particle sizes. Further, as mentioned *supra*, Fu discloses, wherein the $\text{TiO}_2/\text{Ag}_2\text{O}$ weight ratio is 1/0.1-0.4. A skilled artisan, at the time of the invention, would have been readily to construe the amount of silver oxide based on the inorganic pigment, e.g., synthetic mica. Therefore, the determination of the optimum characterization of the composition, e.g., L, a and b values and amount of active ingredient present, such as silver oxide, would have been a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation.

Thus, a skilled artisan would have envisaged the instantly claimed antimicrobial pigment, as disclosed by Fu, in view of Bagala, Sr. *et al.*, as evidenced by Seo *et al.* One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking an antimicrobial pigment with low impurity content, excellent transparency and one that is visually homogeneous, despite the differences in thickness and refractive index of the platelet layers. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Accordingly, the instant invention, as claimed in claims 1, 2, 6, 7, 9, 14 and 16, is *prima facie* obvious over the combination of the aforementioned teachings.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. C. B. III/
Examiner, Art Unit 1614

/Ardin Marschel/
Supervisory Patent Examiner, Art Unit 1614